Product Support Bulletin

Subject: Laser & Non-Impact Printer Error Codes

Date: 4/3/91
Page(s): 1 of 11

PSB No: P-0077
Originator: JV

Epson printers issue beep tones and/or displays error codes when certain error conditions exist. Those beeps or codes can assist you in locating and repairing customer's printers. The following error codes are listed by product name.

EPl-4000 Display Codes

PE	Paper End (out) detected
Co	Cover open
IL	Ink low
lE	Ink End (out)
PJ	Paper jam
EI (blinking)	Heater error (broken heater wire)
E2 (blinking)	Contact error (heater fan or thermistor contact)
E4 (blinking)	CO34 DVR board error
E6 ↔ YY (blinking)	CO34 Main board software Error I (YY will be a number from 66(H) to 7D(H))
E7 ↔ YY (blinking)	CO34 Main board software Error II (YY will be a number from 02(H) to XB(H))
E8 ↔ YY (blinking)	Board contact error, CO34 Main board hardware (YY will be one of the following numbers: 80,81,84,85, 86,87,8A, 8C)
E9 (blinking)	CO34 Main board hardware error
E0 (blinking)	Abnormal voltage
bF	Buffer overflow for fonts

EPl-4000 cont.

bo	Buffer overflow for graphics
CE	Card error
PS	Paper size error
Lr	Release lever error
LE	Envelope lever error
dP	Data processing
FF	Depress the Form Feed button

EPL=6000/ActionLaser/ActionLaser+ LCD Codes

CHANGE DRUM	The drum needs to be changed. The drum cartridge may not be installed, the cartridge may not be installed properly or the cartridge may be defective.
COVER OPEN	Printer cover is open
CPU ERROR	Printer's CPU has made a calculation error
ERROR 10	Program ROM error
ERROR 11	Font cartridge or identity cartridge checksum error
ERROR 12	RAM error
ERROR 20	Memory overflow
ERROR 21	Print overrun error
ERROR 22	**Receive** buffer overflow
ERROR 30	Memory error
ERROR 31	Scanner error
ERROR 32	Heater (Heat Roller Unit) error

EPL-6000 cont.

ERROR 33	Thermistor error
ERROR 40	Parity / Framing error
FONT CARD ERROR	Font cartridge is bad (or is not inserted) correctly
INSERTION ERROR	Paper is not inserted correctly or has jammed at the paper tray
PAPER EMPTY	No paper in the paper cassette Paper cassette is not installed properly Paper cassette lid is open Paper sensor is bad
PAPER JAM	Paper is jammed inside the printer
PAPER SIZE ERROR	Paper setting does not match the size of the paper in the paper cassette
PS CHANGE	Paper size requested by the host conflicts with the SelecType setting

EPL-7000 LCD Codes

NOTE:

In some **cases, the** red **CONTINUE** light flashes when an error **is** detected. This requires you to correct the problem and then press the CONTINUE button to dear the error. However, if the **AUTO** CONT option in SelecType is set to ON, some errors may clear automatically even though the problem remains.

Status messages are preceded by [S], warning messages are preceded by [W], and error messages are preceded by [E]. In some cases the message you see on your display also shows the printer mode.

[E] ADD MEMORY FOR CH-X

The printer has insufficient memory available in the channel displayed.

[E] CARD MEMORY OVERFLOW

This message indicates that the combined memory requirement of the cards in slots A and B exceeds 4 Mbytes.

EPL-7000 cont.

[S] COPY END X/X
Multiple-copy printing is cancelled (you pressed the COPY END button when the printer was off line).

[E] COVER OPEN
The printer cover is open or the imaging cartridge is not installed.

[S] DATA
The printer has received data but is not yet printing, or the printer has received data and is off line.

[E] FEED JAM
Paper is not feeding into the printer from the specified cassette or has jammed on its way into the printer.

[S] GRAPHIC DRAWING
Graphics are being created.

[E] ILLEGAL CARD
A card or cartridge in a particular slot cannot be read.

[S] INITIALIZE
The printer is being initialized (reset) to the factory settings.

[E] INSUFF. MEMORY
The printer has insufficient memory available for the task you have given it. This error can also be cleared by turning the printer off and back on again. However, it may be necessary to simplify the page you are trying to print or add more memory to the printer.

[E] PAGE BUFFER FULL
Text or graphics data has filled the printer's buffer and an incomplete page is ejected.

[S] PAPER FEEDING
The printer is feeding paper.

[E] PAPER JAM
Paper is not being fed into the printer or paper is jammed inside the paper path.

EPL-7000 cont.

[E] PAPER OUT
There is no paper in the standard paper cassette and the optional lower paper cassette (ii installed). Or, the paper set lever is in the manual position and you are not feeding pages correctly.

[E] PAPER OUT SET AUTO XXX
There is no paper in any of the paper cassettes. The right column of the display prompts you to load the correct paper size into the paper cassette.

[E] PAPER OUT SET OPT XXX
There is no paper in the optional lower paper cassette. The right column of the display prompts you to load the correct paper size into the paper tray of the lower paper cassette.

[E] PAPER OUT SET STD XXX
There is no paper in the standard paper cassette. The right column of the display prompts you to load the correct paper size into the standard paper cassette.

[E] PAPER SIZE ERROR
The paper size you selected with SelecType (or the default size if you have not selected a size) does not match the paper loaded in the selected paper cassette.

[S] PRINTING
The printer has received data and is printing.. . . .

[S] PRINT STOP X/X
The printer stops printing during a multi-copy print operation.

[S] RAM Check X.X MB
The printer is checking RAM (X.X = capacity).

[S] READY
The printer is ready to print.

[E] REINSERT CARD
If this message appears on the display, you may have removed a font card or cartridge while the FEED light was still lit or while the printer was on line.

EPL-7000 cont.

[E] REMOVE CARD
You may have inserted a font card or cartridge while the printer was on line or while the FEED light was on. Data still remains in the printer's buffer.

[E] RESELECT TRAY
The optional lower paper cassette is not installed and the INPUT option is set to OPT or AUTO.

[S] RESET
The printer is being reset to the previous settings in the macro specified with LOAD MACRO option in SelecType Level 1.

[S] ROM Check
The printer is checking ROM.

[E] SAVE MEMORY OVERFLOW
If this message appears when you are trying to save a macro with the SAVE MACRO option in SelecType Level 1, the printer does not have enough memory to save any additional macros

[E] SERVICE REQ. CXXX
A controller error has been detected.

[E] SERVICE REQ. EOOXX
A print engine error has been detected.
XX= 03 Fusing Unit (low temp)
04 Main Drive Motor
05 Ozone Fan motor
06 Polygon Mirror Drive
09 HSync Signal

[E] SET FULL PRINT
This message may appear when you are trying to print graphics or a mix of text and graphics.

[S] STANDBY MODE
When both CH P and CH S remain off for about thirty minutes, the printer enters standby mode and this message appears.

[E] STARTUP ERROR
If this message appears when you turn on the printer, the power may have been turned off while the printer was performing a save or reset operation.

EPL-7000 cont.

[W] TONER LOW
The printer is almost out of toner. When this message first appears on the LCD display, you can print up to 25 more pages.

[E] TONER OUT
The imaging cartridge must be replaced.

[E] TRAY SET AUTO XXX
The paper size setting does not match the paper loaded in the specified paper cassette. The right column is the expected paper size and the currently selected cassette.

[E] TRAY SET OPT XXX
The paper size setting does not match the paper loaded in the optional lower paper cassette. The right column is the expected paper size.

[E] TRAY SET STD XXX
The paper size setting does not match the paper loaded in the standard paper cassette. The right column is the expected paper size.

[S] WAIT
Printer is being reset after a START UP ERROR.

[S] WARMING UP
Printer is warming up.

EPL-7500

[E] COVER OPEN
Cover is open or the imaging cartridge is not installed.

[E] MANUAL FEED
Manual feed method is selected.

[S] OFF LINE
Printer is Off tine

[E] OUT OF PAPER
No paper cassette is installed, the paper cassette is empty, or the paper set lever is in the manual position.

EPL-7500 cont.

[E] PAPER ENTRY JAM
Paper is not feeding from the specified paper cassette or has jammed on its way into the printer.

[E] PAPER EXIT JAM
Paper is jammed inside the paper path.

[S] PRINTING
The printer has received data and is printing.

[S] PRINTING TEST
The printer is printing the test page.

[S] PROCESSING
The printer is processing data.

[S] QUIT THE JOB
The On-Line button has been pressed while a print job was in progress. The job can be flushed by pressing the Reset button, or a reset can be cancelled by pressing any other button.

[S] QUITTING THE JOB
The printer is flushing a job from the buffer.

[S] READY
The printer is ready to receive data.

[S] RESETTING
This message appears initially when the printer is turned on, and momentarily between print jobs.

[E] TONER LOW
The imaging cartridge must be replaced.

[S] WAIT- FOR READY
The On-tine button was pressed while a print job was in progress. The printer continues printing until the current job is completed, then it goes Of-Line.

[S] WAITING
The printer is in the process of executing a job and has run out of data and is waiting for the channel to provide more data.

EPL-7000 cont.

[S] WARMING UP
The printer is warming up.

Note:
If any of the following messages appear, turn the printer off for at least five seconds, then turn it back on. If the same message is displayed, repair is required.

SCAN MOTOR ERROR

HSYNC ERROR

HEATER LAMP ERROR

MAIN MOTOR ERROR

FAN MOTOR ERROR

ES300C Display Codes

E-C Command error. An unidentified command or parameter was detected.

E-I Interface error
a. Incorrect communication parameter received.
b. Broken connector or wire.
c. Host failed to respond within 30 seconds.
d. Host is not accepting data. (DSR= Low)

E-F Fatal error
a. A lamp is broken.
b. Power is applied before the transportation screws were removed.
c. System failure

GQ-3500 Display Codes

do	Cover Open error
E0 ↔ 00	Engine driver CPU error.
E0 ↔ 01	Option tray CPU error.
E0 ↔ 02	Option tray motor error.

GQ-3500 cont.

E0 ↔ 03	Optical unit error.
E0 ↔ 05	Main motor error.
E0 ↔ 06	Fusing unit error.
E1 ↔ **80**	Exception error.
E1 ↔ **81**	Trap error.
E1 ↔ **82**	Bus error.
E1 ↔ **83**	Address error.
E1 ↔ **84**	Illegal Instruction.
E1 ↔ **89**	NMI error.
E1 ↔ **91**	Reverse vector interrupt error.
E1 ↔ **92**	User vector interrupt error.
E1 ↔ **A1**	System RAM error.
E1 ↔ **A2**	External RAM error.
E1 ↔ **A3**	CG ROM error.
J0	Paper feed error.
J1	Paper feed jam.
J2	Paper exit jam.
Po	Paper empty, paper tray is not installed or paper is not installed properly.
PU	Paper size error.
To	Toner empty.

GQ-3500 **cont.**

U1	Replace the collector unit and lens shield.
U2	Replace the drum cartridge and lens shield.

Product Support Bulletin

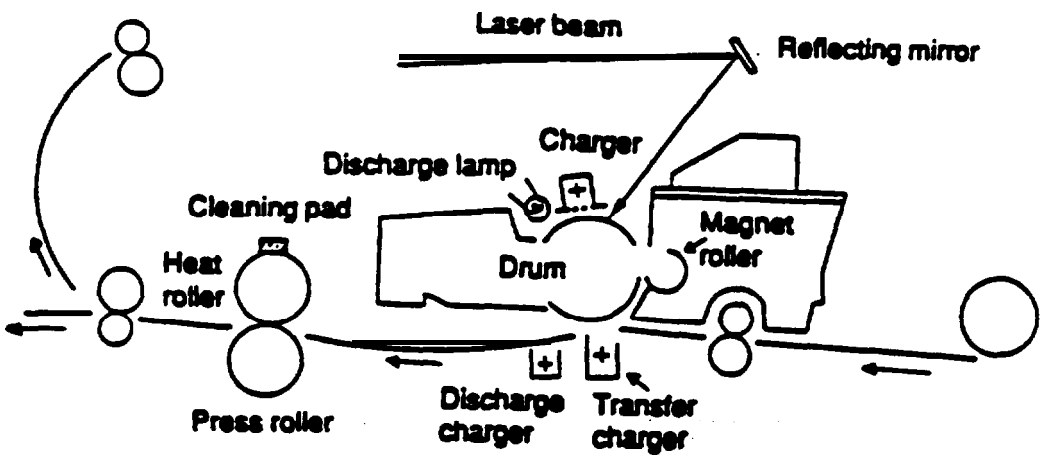
Subject: EPL-6000/ActionLaser Paper Jams

Date: 4/3/91
Page(s): 1 of 2

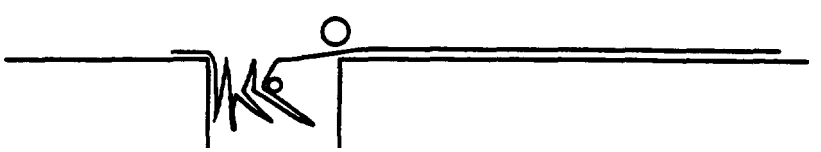
PSB No: P-0074
Originator JV

This bulletin is to help eliminate the accidental breaking of the Transfer Corona Wire due to paper jams.

The figure below shows the path the paper takes through the printer. The Paper enters the printer from the right and passes below the OPC Drum where it picks up the toner. The Transfer Charger charges the paper so that the toner will adhere to the page.

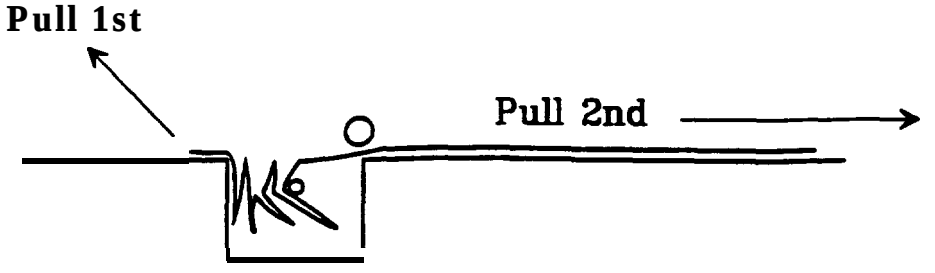


In the event of a paper jam, the paper may become folded under and around the Transfer Charger wire (as shown below).



Whenever a paper jam occurs you must remove the processing tray (which includes the Developer Unit and the Drum Unit). Do not remove the jammed paper by pulling the paper to the right (toward the paper supply tray) as this could break the Transfer Charger wire.

The proper method of removing a paper jam is to first insure that the paper is not wrapped around the Transfer Charger wire. If it is, carefully pull the paper away from the wire area as shown below.



Once the paper is clear of the wire, the paper can then be pulled to the right and out of the printer. Replace the processing tray and close the printer cover.

Breakage of the Transfer Charger wire will cause a change in the print quality. The toner will not be completely transferred to the paper and the print will be light or inconsistent in darkness.

If the Transfer Charger wire is broken, the Transfer Unit must be replaced. The part number is HGMBK-04601.

EPSON

EPSON AMERICA, INC.

INFORMATION

Product Support Bulletin

Subject: Power Specifications

Date: 2/7/90
Page: 1 of 2

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Originator: RFB

The following information is a list of the power requirements for the Epson 9 and 24 pin printers and laser printers.

Product	Voltage	Max. Current Consumption	Power Consumption	BTU/HR
Apex80	120V	.7 Amp	84 VA maximum	286.69
DFX5000	120V	5.0 Amp	600 VA maximum	2047.80
DFX5000	220V	3.0 Amp	660 VA maximum	2252.58
EPL6000	120V	6.0 Amp	720 VA maximum	2457.36
EX800/1000	120V	1.0 Amp	120 VA maximum	409.56
FX850/1050	120V	1.5 Amp	180 VA maximum	614.34
FX86e/286e	120V	1.0 Amp	120 VA maximum	409.56
GQ3500	120V	6.0 Amp	720 VA maximum	2457.36
L1000	120V	1.8 Amp	216 VA maximum	737.20
LQ500	120V	1.8 Amp	216 VA maximum	737.20
LQ510	120V	1.8 Amp	216 VA maximum	737.20
LQ1010	120V	1.8 Amp	220 VA maximum	750.86
LQ850/1050	120V	2.0 Amp	240 VA maximum	819.12
LQ2550	120V	4.2 Amp	504 VA maximum	1720.15
LX800	120V	.7 Amp	84 VA maximum	286.69

Product	Voltage	Max. Current Consumption	Power Consumption	BTU/HR
LX810	120V	.7 Amp	84 VA maximum	286.69
T750	120V	1.0 Amp	120 VA maximum	409.56
T1000	120V	.7 Amp	84 VA maximum	286.69

If the power requirements of a particular Epson printer is not listed please refer to the appropriate User's Manual for the electrical specifications. In the event that the User's Manual is not available, locate the silver label on the back of the Epson printer. This is a reliable source for the electrical requirements. The following formula is used to calculate the electrical power requirements:

VOLTAMPS is equivalent to WATTS
VOLTAMPS = Volts * Amps
AMPS = Voltamps/Volts
BTU/HR = Watts * 3.413

Example:

120V * 1A = 120VA
120VA/120V = 1A
120VA is equivalent to 120W
120W * 3.413 = 409.56 BTU/HR

Heat output is rated in BTU/HR.

EPSON

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INFORMATION

Product Support Bulletin

Subject: EPL- 6000 Questions and Answers

Date: 4/11/90
Page: 1 of 5

PSB No: P-0058A
Originator: SLS

This bulletin answers some of the most asked questions about the EPL- 6000 printer. The questions and answers are listed below.

QUESTIONS AND ANSWERS ON THE EPL- 6000

Q1. What printer does the EPL- 6000 emulate?

A. The EPL- 6000 provides full HP LaserJet Series II software emulation (HP PCL Level IV device).

Q2. Are any optional emulations available for the EPL- 6000?

A. Yes, FX Series emulation is available for the EPL- 6000 through the use of an optional FX Identity Cartridge, the p/n for the cartridge is IBS100.

Q3. What printer driver selection should I choose in my software programs when using the EPL- 6000?

A. The proper printer driver selections are listed below from best to worst.

HP LaserJet Series II	(Best)
HP LaserJet Plus	
HP LaserJet	(Worst)

Q4. What is the rated print speed and resolution for the EPL- 6000?

A. The EPL- 6000's print speed is up to 6 pages per minute (PPM) when using letter - size paper at up to 300 dots- per - inch (DPI).

NOTE: A print speed of up to 6 PPM is achieved by using the printer's number of copies feature.

Q5. How do I run a SELF- TEST on the EPL- 6000?

A. The EPL- 6000 provides (3) three built - in SELF-TESTS. In order to activate any of the built- in SELF -TESTS the printer must be set to “OFF - LINE”. Listed below are the keystrokes necessary to press to initiate the SELF-TESTS.

1. SELF TEST - Press the “SPECIAL” and “MANUAL” buttons at the same time.

   (Used to print out a test pattern that is helpful when adjusting or checking the print darkness. This test may also be used to provide a basic determination of whether the printer is functional.)

2. FONT PRINT - Press the “SPECIAL” and “RESET/CONTINUE” buttons at the same time.

   (Used to print out information and print samples on available fonts, including built- in fonts, cartridge fonts and downloaded (soft) fonts.)

3. STATUS PRINT - Press the “UP” and “DOWN” arrow buttons at the same time.

   (Used to determine the printer’s current settings, such as font source and number, symbol set, paper size, orientation and data buffer configuration.)

Q6. After I make changes in SelecType what must I do to activate these changes?

A. After making the necessary changes in SelecType press the “SELECTYPE” button to exit SelecType, the LCD will display “OFF- LINE”. At this point press and hold the “RESET/CONTINUE” button for approximately 3 seconds. When the printer displays “RESET” on the LCD display, the button should be released. The SelecType changes you made have now been saved.

NOTE: If the INTERFACE, DATA BUFFER, or OVERLOAD BUFFER settings are changed the printer must also be powered “OFF” then back “ON” in order for these changes to become active.

Q7. How do I set the EPL- 6000 back to the factory - default settings using the SelecType buttons on the printer's front panel?

A. Set the printer to OFF- LINE, then press the SelecType button. The next step is to press and hold the "RESET/CONTINUE" button for approximately 3 seconds, when "INITIALIZE" appears on the LCD display release the button. The final step is to press and hold the "RESET/CONTINUE" button again for approximately 3 seconds, when "RESET" will appear on the display release the button. The printer has now been reset to the factory- default settings.

NOTE: If the INTERFACE, DATA BUFFER, 'or OVERLOAD BUFFER settings are changed the printer must also be powered "OFF" then back "ON" in order for these changes to become active.

Q8. Why does the EPL- 6000 display "DATA IN BUFFER" on the LCD and not print anything when I send data to it?

A. The EPL- 6000 is a page printer meaning that it prints a whole page at a time. If the EPL- 6000 doesn't receive a full page of data or a FORM FEED command from the software it will not print

Q9. How do I eject the page from the EPL- 6000 when "DATA IN BUFFER" is shown on the LCD display?

A. Press the "RESET/CONTINUE" button to eject the page.

Q10. Where can I purchase a Technical Reference Manual (programmer's manual) for the EPL-6000?

A. A Technical Reference Manual for the HP LaserJet Series II printer can be purchased directly from HP's Direct Marketing Department. The phone number for HP's Direct Marketing Department is 800-538-8787. The part number for HP's LaserJet Series II Technical Reference Manual is: 33440- 90905.

Q11. Why does the EPL- 6000 beep and display "ERROR 20" several times when I attempt to use downloaded (soft) fonts?

A. An "ERROR 20" message indicates you have exceeded the printer's available user memory. A solution to this would be to add more user memory to the EPL- 6000. The P/N for the optional 2MB memory board is IBS401.

Q12. How many internal (built - in) fonts are included with the EPL- 6000 and what are they?

A. The EPL- 6000 has (3) three portrait fonts and (3) three landscape fonts for a total of (6) six internal fonts. Listed below are the internal fonts.

Courier	12 point	portrait	10 CPI
Courier	12 point	landscape	10 CPI
Courier bold	12 point	portrait	10 CPI
Courier bold	12 point	landscape	10 CPI
Line printer	8.5 point	portrait	16.6 CPI
Line printer	8.5 point	landscape	16.6 CPI

Q13. How many lines can be printed on an 8.5" by 11" page when using 1/6" (default) line spacing?

A. When printing in portrait 60 lines can be printed on a page, 45 lines for landscape.

Q14. Who manufactures the engine used in the EPL- 6000?

A. The engine used in the EPL- 6000 is manufactured by TEC (Tokyo Electric co., LTD.).

Q15. Is it possible to select Landscape printing on the EPL- 6000 by using the printer's SelecType feature?

A. Yes, if a landscape font is selected, the EPL- 6000 will automatically default to landscape mode. SelecType allows a font to be selected via a font number. Of the EPL- 6000's internal fonts, font numbers 12 through 23 are landscape fonts. If any of these font numbers are selected via SelecType the printer will default to landscape mode.

Q16. How is the optional memory board's memory upgraded from 2MB to 4MB?

A. The optional memory board's memory can be upgraded from 2MB to 4MB by populating the 16 empty sockets on the memory board with memory chips. The chips to use are a 1MB x 1 bit C - MOS DRAM, listed below are three sources for these chips.

Toshiba	TC511000AP - 10
OKI	MSM511000- 12RS
Motorola	MCM511000AP- 10

Q17. Can the EPL- 6000 print italic characters?

A. Yes, but italic characters are not part of the EPL- 6000's internal fonts. To print italic characters a font cartridge or downloaded font that contains italic characters must be used.

Q18. What are the part numbers for the EPL- 6000 options and supplies?

A. Listed below are the part numbers for the EPL- 6000 options and supplies.

FX Identity Cartridge	#IBS100
Replacement Toner Cartridge	#IBS300
Drum Unit	#IBS301
Optional 2MB Memory Board	#IBS401

Q19. What Font cartridges have been tested to be compatible with the EPL- 6000?

A. The EPL- 6000 can be used with the following Hewlett Packard Font cartridges -A,B,C,D,E,F,G,H,J,K,L,M,N,P,Q,R,T,U,V,W,X,Y,Z1A,C02 (MS), and the Pro - Collection.

The Dataline Multifont, the Everex B Font, F Font, T Font, Z Font[1], Legal[2], SST, BST[2], ALL- IN - 1[2], the IQ Engineering Supercartridge 1, and the UDP 65 - IN - ONE will also work in the EPL- 6000. Other cartridges may work, but have not been tested by Epson at this time.

NOTES:
1. If using font cartridge slot 2, only 1 or 2 fonts could not be properly selected.
2. Only works in font cartridge slot 2.